

West Virginia - 2006

Forest Health Highlights



The Resource

The West Virginia landscape is dominated by more than 11.8 million acres of forest. Due in large part to its varied topography, the forest is a rich diversity of oaks, hickories, spruce, pines, and the State Tree—sugar maple. Ninety percent of all forests in West Virginia are privately owned, but there are 9 State forests, 36 State parks, and 56 wildlife management areas that provide public enjoyment.

Forest Stewardship

The Forest Stewardship Program philosophy ensures that private landowners apply environmental and economic resource management principles to benefit themselves, future landowners, and the public. The focal point of the Forest Stewardship Program is the development of a long-term management plan for each woodland owner who is willing to participate. In West Virginia, the Forest Stewardship Program includes having a forest management plan written by a professional forester as well as financial assistance for recreation, forest improvement, soil and water protection, wetlands protection, fisheries habitat enhancement, and wildlife habitat enhancement. There have been 4,040 forest stewardship plans developed covering 672,135 acres in West Virginia.

Special Issues

Gypsy Moth — West Virginia Department of Agriculture (WVDA) field agents surveyed more than 200,000 acres of State and private land during the fall of 2005 to determine areas at risk for potential gypsy moth defoliation in the spring of 2006. The WVDA treated 8,121 acres for gypsy moth in 2006 under the Cooperative State County Landowner Program. Of that total, 2,977 acres were treated with Btk while 5,144 acres were treated with Dimilin. Under the Slow The Spread Program, a total of 21,021 acres were treated. Btk was used on 1,110 acres while 9,730 acres were treated with Dimilin, and four blocks totaling 10,181 acres were treated using mating disruption.

The WVDA flew and sketchmapped 17,272 acres of gypsy moth defoliation in eight West Virginia counties. This was a marked increase over the defoliation recorded in 2005 when only 2,641 acres were observed and mapped. Gypsy moth populations appear to be on the rise again.

Sudden Oak Death (SOD) National Forest Survey — This year, a total of 62 locations (42 nursery perimeters, 20 forested settings) were surveyed. Nurseries were chosen to be surveyed if they received any host stock from the West Coast. Plant samples (115 for a USDA Forest Service survey) were screened by our lab with duplicate samples screened by Mississippi State University for the Forest Service SOD survey. Both PCR labs confirmed that no sudden oak death was present in the samples screened. For the APHIS SOD survey, plant samples were screened using ELISA and PCR. A total of 264 plant samples were screened for *P. ramorum*, which was not detected. *P. ramorum* has yet to be detected in West Virginia.

Sudden Oak Death (SOD) Stream Sampling — This year the USDA Forest Service launched a pilot survey in which streams are sampled using bait leaves to detect the presence of *Phytophthora ramorum*, causal agent of sudden oak death, as well as other species of *Phytophthora*.

Five watersheds were chosen, with one stream per watershed sampled. Native rhododendron was used for this survey. Once a month, baits were deployed in a nylon mesh bag and exposed for a 2-week period, then retrieved for laboratory processing.

Nested PCR was used to detect *P. ramorum*, and a combination of culturing and PCR was used to detect *Phytophthora* presence. *P. ramorum* was not detected in any of the bait leaves sampled. The rate of *Phytophthora* spp. recovery was approximately 73 percent.

Beech Scale — A scale survey was conducted this year to locate any isolated pockets of scale deviating from the known advancing front. In late fall of 2003, a branch sample was submitted for beech scale determination from Ritchie County. It was identified as *Cryptococcus fagisuga*. This occurrence is approximately 50 miles from the known advancing front.

As it turned out, scale was detected not too far from the known front (another 374,672 acres were added to the advancing front). The site and same tree in Ritchie County where the branch sample was taken and submitted was visited but scale was not found. The conditions were very wet, making it extremely difficult to detect scale presence on any of the beech onsite. If it is there, it is at an extremely low level. Since this site could not be validated for scale occurrence, it will be monitored over the next few years to see if any population buildup occurs. New counties were added to the advancing front in 2006—Taylor, Lewis, and Braxton. Currently, beech scale encompasses approximately 3,653,958 acres.

Dogwood Health Survey — A survey of dogwood was conducted to determine current numbers and population structures of dogwood in relationship to site factors implicated in disease severity to aid in predicting dogwood population trends. This included collecting data such as aspect, elevation, number of trees in each transect, distance to each tree along the transect, DBH, presence of cankers, percent foliage infected, percent dieback or dead, crown transparency, crown density, crown position/class, crown light exposure, distance to any opening or stream, and the direction to the opening.

WVDA personnel were responsible for locating 30 trees (60 trees total), including any dead and standing trees, in each of two risk hazard categories for dogwood anthracnose—LOW and VERY LOW. Risk level was determined by elevation and aspect. A total of 14 sites were surveyed for dogwood. Two of those sites did not have any dogwood present. In the LOW risk hazard category, there was an average dieback of 16 percent and 0 percent anthracnose present. The dogwood population for those sites was not a mature one, with an average d.b.h. of 2.5 inches. For the VERY LOW risk hazard category, there was an average dieback of 19 percent and about 6 percent anthracnose present. Again, the dogwood population for those sites was not a mature one, with an average d.b.h. of 2.4 inches.

Emerald Ash Borer (EAB) — In 2006, the WVDA continued EAB detection surveys, which primarily targeted high-risk areas and areas of ash decline. EAB visual surveys were conducted by CFHP field agents and summer field scouts in 35 counties. One hundred and four trap trees were established, mainly along major highway corridors entering the State from Ohio and western Pennsylvania. Half of the trap trees were cut and peeled in the fall for EAB detection. EAB has not been found in West Virginia.

Hemlock Woolly Adelgid (HWA) — With the addition of Barbour, Boone, Braxton, and Kanawha

Counties in 2006, HWA can now be found in 28 West Virginia counties. The WVDA continued its suppression program to treat high-value and high-visibility infested hemlocks. Imidacloprid was injected around infested trees into the soil using Merit 75WSP with a Kioritz soil injector or injected into the trunks using IMA-jet and the Arborjet Tree IV system. A total of 532 trees were treated at 15 sites.

Due to the limited availability of predatory beetles, only one release of 460 *Scymnus sinuanodulus* was made in Calvin Price State Forest. Selected previous release sites of *Sasajiscymnus tsugae*, *Laricobius nigrinus*, and *Scymnus sinuanodulus* were monitored for predator survival and impact on HWA.

Loopers — Winter looper surveys predicted low populations in Kanawha, Hardy, Wayne, Wood, Mason, Mineral, and Hampshire Counties where sticky banding was conducted. Defoliation was very light and was not mapped.

Exotic Bark Beetles — In 2006, the WVDA worked with the USDA Forest Service and Animal and Plant Health Inspection Service (APHIS) on an Early Detection/Rapid Response (EDRR) Survey for exotic bark beetles. Lindgren funnel trapping was conducted by USDA APHIS personnel at 25 locations in industrial, urban, and forested settings in 18 counties. Samples were submitted to WVDA taxonomists for prescreening of the 10 most common species of Scolytidae. Samples were then sent to Dr. E. Richard Hoebeke at Cornell University, the taxonomist under contract, for final identification.

Siricid Wood Wasp (SWW) — In 2006, the WVDA gave limited assistance to the USDA Forest Service for a siricid wood wasp survey in the coniferous forests in eastern West Virginia. The WVDA was directly responsible for seven Lindgren funnel traps in four locations in Greenbrier and Hardy Counties. Samples were sent to the Carnegie Museum of Natural History for identification.

Forest Fire

FY 2006 was an average year for fire weather in West Virginia. In FY 2006, there were 1,042 wildland fires that consumed 18,581 acres, resulting in an estimated \$5,472,270 in damage to natural resources. Debris burning and incendiary fires are the two leading causes of wildfires in West Virginia.

For More Information



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